

Claims

- [c1] An apparatus for removing metal from a metallized surface of a workpiece, comprising:
 - a polishing pad,
 - an electrically conductive surface disposed proximate to said polishing pad;
 - at least one conducting element disposed within the electrically conductive surface;
 - a workpiece carrier configured to press the workpiece against the polishing pad; and
 - a power source having a first positive output connected to the conducting element and a second negative output connected to the electrically conductive surface.
- [c2] The apparatus of claim 1 wherein said at least one conducting element is positioned flush with a top surface of said polishing pad.
- [c3] The apparatus of claim 1 wherein said at least one conducting element is positioned above a top surface of said polishing pad.
- [c4] The apparatus of claim 1 wherein said at least one conducting element is positioned below a top surface of said

polishing pad.

- [c5] The apparatus of claim 1 wherein said conducting elements are positioned within the electrically conductive surface such that a uniform electric potential gradient is created across the metallized surface of the wafer.
- [c6] The apparatus of claim 1 wherein said at least one conducting element is comprised of a material that exhibits low electrical resistance and resistance to corrosion.
- [c7] The apparatus of claim 1 wherein the distance between the metallized surface of the workpiece and the electrically conductive surface is less than 3 mm.
- [c8] The apparatus of claim 7 wherein the distance between the metallized surface of the workpiece and the electrically conductive surface is less than 1 mm.
- [c9] The apparatus of claim 8 wherein the distance between the metallized surface of the workpiece and the electrically conductive surface is less than 200 angstroms.
- [c10] The apparatus of claim 1 wherein the metallized surface of the workpiece does not contact the electrically conductive surface during removal of the metal from the metallized surface of the workpiece.